

R E M A R K S

New claim 56 is supported by the paragraph bridging pages 5 and 6 of the specification and on page 107, lines 4, 12 and 22.

With respect to Rule 116, entry of claim 56 is respectfully requested, since claim 56 recites "immersion blocks according to claim 18" and claim 18 was in the case prior to the final rejection.

Claim 55 was rejected under 35 USC 112, first paragraph, for the reasons set forth at the top of page 3 of the Office Action.

It was alleged in the Office Action that the feature of "80 to 1500 mm" would appear to be new matter. Applicants respectfully disagree.

The feature of "80 to 1500 mm" is not new matter, since such feature is supported on page 73, line 17 of the specification. It is noted that support in the specification for the amendment to claim 55 involving the range of 80 to 1500 mm was set forth on page 3, second paragraph of the AMENDMENT UNDER 37 CFR 1.111 dated October 3, 2002. OK

Withdrawal of the 35 USC 112, first paragraph rejection is thus respectfully requested.

The presently claimed invention concerns an underwater immersion block produced by a method comprising:

(a) preparing a granular iron steel making slag mixture; and  
(b) producing a carbonate by carbonation of the mixture to agglomerate the mixture by using the carbonate as a binder.

The presently claimed invention also concerns a method for repairing a river bed comprising immersing a plurality of such underwater immersion blocks in a body of water which includes water creatures.

The presently claimed invention is also directed to a method of producing an underwater immersion block comprising:

(a) preparing a granular iron and steel making slag mixture;  
(b) forming a packed bed of the mixture; and  
(c) carrying out a carbonation of the mixture in the packed bed to agglomerate the mixture.

Claims 18, 19 and 21 to 55 were rejected under 35 USC 103 as being unpatentable over Knopf et al. (USP 6,387,174 or USP 6,264,736) for the reasons set forth on page 2 of the Office Action.

The position was taken in the Office Action that Knopf et al. teach using cementitious structures underwater. This is based on the following single sentence: "Carbonated cementitious materials can also be used for building artificial reefs."

Knopf et al. do not teach how such artificial reef would be constructed.

Knopf et al. do not teach or suggest the use of immersion blocks to repair a river bed (see new claim 56). In this regard, see the following passages in the present specification.

Page 5, lines 4 to 14: "living circumstances of creatures such as fishes and shells, and a part of the tendency, ... to repair riverbeds to be suited to water living creatures (fishes, shells, water insects and others) to inhabit and live. ...much uneven riverbeds made by blocks are better for water living creatures."

Page 79, line 19 to page 80, line 1: "It was found to exhibit, when sinking blocks, excellent effects in forming spaces ...particularly excellent effects in moving of other water living creatures than fishes or rearing of water living plants".

Page 105, lines 4 to 12: EXAMPLE 5 ("massive block materials having a size of about 30 to 250 mm with enough strength as river immersion blocks");

Page 105, line 13 to page 107, line 26: EXAMPLE 6;

Page 107, lines 5 to 8: "...exhibit excellent performance in forming living spaces for fishes or rearing of water living plants such as algae, and in addition, those display special functions in the moving of other creatures."

Page 117, lines 21 to 25: ("for the repairing of river beds, an enormous amount of blocks are required, however according to the present invention, blocks can be supplied at a low cost, in comparison with cases of using material blocks or concrete materials.")

There are substantial differences between using a material to build an artificial reef as mentioned by Knopf et al. and repairing a river bed using immersion blocks according to applicants' claimed invention.

It is therefore respectfully submitted that applicants' claimed invention is not rendered obvious over Knopf et al.

Enclosed is a check for \$18 in payment of an additional claim.

Reconsideration is requested. Allowance is solicited.

If the Examiner has any comments, questions, objections or recommendations, the Examiner is invited to telephone the undersigned at the telephone number given below for prompt action.

Respectfully submitted,



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Encs.: (1) PETITION FOR EXTENSION OF TIME  
(2) Check for \$18